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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,894	01/30/2002	Clinton S. Hartmann	RFSC-0007	2292

27964 7590 01/24/2007

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EXAMINER	
HA, DAC V	
ART UNIT	**PAPER NUMBER**
2611	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/24/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/062,894	HARTMANN, CLINTON S.	
	Examiner	Art Unit	
	Dac V. Ha	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *11-20* is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. "Signals" are not statutory subject matter. A case involving this issue is presently on appeal to the Federal Circuit: In re Nuiflen, No. 06-1301.

Claim 1 is directed to a "propagated signal" having certain characteristics. A man-made signal represents coded information. A signal can be an abstract quantity describing the information or a measurable physical quantity (e.g., the fluctuations of an electrical quantity, such as voltage) containing information. See In re Walter, 618 F.2d 758,770, 205 USPQ 397, 409 (CCPA 1980) ("The 'signals' processed by the inventions of claims 10-12 may represent either physical quantities or abstract quantities; the claims do not require one or the other"). The signal of claim 1 is not recited to have any specific physical form, i.e., it is not expressly or impliedly an electrical or electromagnetic signal. Nevertheless, since the signal is "propagated" and has a time period divided into a group of time slots, we interpret the signal to be a time varying physical signal instead of just an abstract quantity, such as a data format.

The signal of claims 1-10 is considered to be nonstatutory subject matter because a "signal" or a "propagated signal" does not fall within one of the four statutory categories of subject matter under 35 U.S.C. § 101.

The categories of statutory subject matter are "process, machine, manufacture, or composition of matter." 35 U.S.C. § 101. "[N]o patent is available for a discovery, however useful, novel, and nonobvious, unless it falls within one of the express categories of patentable subject matter of 35 U.S.C. § 101." Kewanee Oil Co. v. Bieron Corp., 416 U.S. 470, 483, 181 USPQ 673,679 (1974).

A "process" is a series of acts and, since claims 1-10 do not recite acts, it is not a process. Compare the method of propagating a signal in claims 11-20, which are not rejected.

The three product classes of machine, manufacture, and composition of matter have traditionally required physical structure or substance. "The term machine includes every mechanical device or combination of mechanical powers and devices to perform some function and produce a certain effect or result." Corning v. Burden, 56 U.S. 252, 267 (1854); see also Burr v. Duryee, 68 U.S. 531,570 (1863) (a machine is a concrete thing, consisting of parts or of certain devices and combinations of devices). Machines do not have to have moving parts. In modem parlance, electrical circuits and devices, such as computers, are referred to as machines. The signal of claim 1 has no concrete tangible physical structure, and does not itself perform any functions. Therefore, a signal does not fit within the definition of a "machine."

A "manufacture" and a "composition of matter" are defined in Diamond v. Chakrabarty, 447 U.S. 303,308, 206 USPQ 193, 196-97 (1980):

> [T]his Court has read the term "manufacture" in accordance with its dictionary definition to mean "the production of articles for use from raw or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." American Fruit Growers, Inc. v. Brogdex Co., 283 U.S. 1,

11 (1931). Similarly, "composition of matter" has been construed consistent with common usage to include "all compositions of two or more substances and ... all composite articles, whether they be results of chemical union, or of mechanical mixture, or whether they be gases, fluids, powders or solids." Shell Development Co. v. Watson, 149 F. Supp. 279, 280 (D.C. 1957) (citing 1 A. Deller, Walker on Patents § 14, p. 55 (lst ed. 1937). [Parallel citations omitted.]

The signal is not composed of matter and is clearly not a "composition of matter." A "manufacture" is the residual category for products. 1 Chisum, Patents § 1.0213] (2004) (citing W. Robinson, The Law of Patents for Useful Inventions 270 (1890)). If a signal falls within any category of § 101, it must fall within this category. The definition of "manufacture" from Diamond v. Chakrabarty requires a tangible article prepared from materials. "Tangible" refers to something that is discernible by touch. The other cases dealing with manufactures also require a tangible physical article. The CCPA held in In re Hruby, 373 F.2d 997, 153 USPQ 61 (CCPA 1967) that there was no distinction between the meaning of "manufacture" in § 101 and "article of manufacture" in § 171 for designs. The issue in Hruby was whether that portion of a water fountain which is composed entirely of water in motion was an article of manufacture. The CCPA relied on the analysis of the term "manufacture" in Riter- Conley Mfg. Co. v. Aiken, 203 F. 699 (3d Cir.), a case involving a utility patent. The CCPA stated in Hruby: "The gist of it is, as one can determine from dictionaries, that a manufacture is anything made 'by the hands of man' from raw materials, whether literally by hand or by machinery or by art." 373 F.2d at 1000, 153 USPQ at 65. The CCPA held that the fountain was made of the only substance fountains can be made of--water--and determined that designs for water fountains were statutory. Articles of manufacture in designs manifestly require physical

matter to provide substance for embodiment of the design. Since an "article of manufacture" under § 171 has the same meaning as a "manufacture" under § 101, it is inevitable that a manufacture under § 101 requires physical matter.

Some further indirect evidence that Congress intended to limit patentable subject matter to physical things and steps is found in 35 U.S.C. § 112, sixth paragraph, which states that an element in a claim for a combination may be expressed as a "means or step" for performing a function and will be construed to cover the corresponding "structure, material, or acts described in the specification and equivalents thereof." "Structure" and "material" indicate tangible things made of matter, not energy.

The signal of claims 1-10 does not have any tangible physical structure or substance and does not fit the definition of a "manufacture" which requires a tangible object.

Our conclusion that a "signal" does not fit within any of the four categories of § 101 is consistent with In re Bonczyk, 10 Fed. Appx. 908 (Fed. Cir. 2001) (unpublished) ("fabricated energy structure" does not correspond to any statutory category of subject matter and it is unnecessary to reach the alternate ground of affirmance that the subject matter lacks practical utility) and with the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, 1300 Off. Gaz. Patent and Trademark Off. (O.G.) 142, 152 (Nov. 22, 2005), in the section entitled "Electro-Magnetic Signals." Although the Manual of Patent Examining Procedure § 2106(IV)(B)(1)(c) implies that "signals" may be statutory subject matter, the MPEP is not binding on the Board. It is noted that the "useful, concrete and tangible result" test of State St. Bank & Trust Co. v.

Signature Fin. Group, Inc., 149 F.3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998), does not apply because that test was enunciated in the context of "transformation of data by a machine." We defer to our reviewing court, the U.S. Court of Appeals for the Federal Circuit to make the decision on whether non-tangible and/or non-physical things constitute patentable subject matter under 35 U.S.C. § 101. The Federal Circuit cannot address rejections that it does not see. See Enzo Biochem, Inc. v. Gen-Probe Inc., 323 F.3d 956, 972, 63 USPQ2d 1609, 1619 (Fed. Cir. 2002) (Lourie, J., concurring in decision not to hear the case en banc) ("As for the lack of earlier cases on this issue, it regularly happens in adjudication that issues do not arise until counsel raise them, and, when that occurs, courts are then required to decide them.").

In summary, the signal of claims 1-10 is unpatentable subject matter because it does not fall within any category of § 101.

Allowable Subject Matter

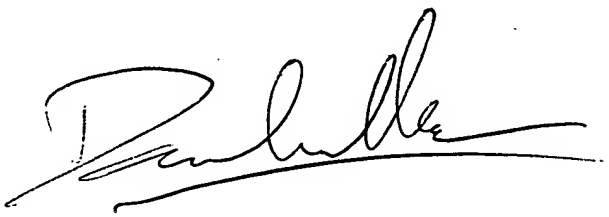
2. **Claims 11-20** are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 571-272-3040. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-3086. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dac V. Ha
Primary Examiner
Art Unit 2611